

WHAT IS CLAIMED IS:

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1. A TV phone in which a television and a portable cellular phone are integrally combined, the TV phone comprising:

a TV module for receiving and demodulating a desired TV channel signal among radio-frequency electromagnetic signals received in response to an input of a tuning signal, when the TV module operates by supply of a power supply voltage, to generate a composite video signal, a composite synchronizing signal and a composite audio signal;

a Mobile Station Radio Frequency Unit (MRFU) for demodulating a signal indicative of an incoming call received through a forward channel, forming an audio conversion channel among the received radio-frequency electromagnetic signals to output the demodulated signal, and modulating and transmitting a signal in a reverse channel;

a TV control section for supplying the tuning signal corresponding to a channel selection command signal to the TV module, synchronizing On Screen Display (OSD) data corresponding to display control data and display data with the composite synchronizing signal to output the synchronized signal as a video signal;

a Mobile Station Processor (MSP) for establishing a phone or TV mode in response to an input command, generating the channel selection command signal stored in a predetermined memory area by setting the TV mode, supplying the display control data to the TV control section or interrupting a power supply voltage supplied to the TV module according to a preset incoming call alarm mode when receiving an incoming signal from the MRFU, and processing audio data outputted from the MRFU to output the processed audio

data signal while supplying audio data to the MRFU; and

a display unit for synchronizing the composite video signal from the TV module and the video signal from the TV control section with the composite synchronizing signal and displaying the synchronized composite video signal and the video signal on an image viewing screen.

2. The TV phone recited in claim 1 further comprising a power switch disposed between the TV module and a power supply unit, the power switch being switched under the control of the MSP to turn on/off the TV module.

3. The TV phone recited in claim 2 further comprising an antenna for receiving or transmitting a radio-frequency, electromagnetic signal; and a Radio Frequency Switch (RFSW) disposed between the TV module and the MRFU, the RFSW allowing the antenna to be connected to both the TV module and the MRFU in response to the establishment of the TV mode of the MSP, and allowing the antenna to be connected to only the MRFU in response to the establishment of the phone mode of the MSP.

4. The TV phone recited in claim 3, wherein in the TV mode allowing for viewing of a TV image, an incoming call alarm mode of the TV phone in the MSP upon reception of an incoming call comprises interrupting a power supply voltage supplied to the TV module and switching from the TV mode to the phone mode.

5. The TV phone recited in claim 3, wherein in the TV mode

allowing for reviewing of a TV image, an incoming call alarm mode of the TV phone in the MSP upon reception of an incoming call comprises switching off and on, at a predetermined interval, only the audio signal outputted from the TV module.

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6. The TV phone recited in claim 3, wherein in the TV mode allowing for reviewing of a TV image, an incoming call alarm mode of the TV phone in the MSP upon reception of an incoming call comprises displaying an incoming call character message or a preset graphic message at a specific region or an entire portion of a TV image viewing screen.

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7. The TV phone recited in claim 3, wherein the MSP selectively controls at least one of the power switch, an audio outputting switch and the TV control section based on a preset incoming call alarm mode in response to reception of an incoming call.

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